

transmission of the Light; I found that white was opposite to black, red to blue, yellow to violet, and green to a compound of red and violet. That is, those parts of the Glass were black when looked through, which when looked upon appeared white, and on the contrary. And so those which in one case exhibited blue, did in the other case exhibit red. And the like of the other Colours. The manner you have represented in the third Figure, where AB, CD, are the surfaces of the Glasses contiguous at E, and the black lines between them are their distances in arithmetical progression, and the Colours written above are seen by reflected Light, and those below by Light transmitted.

Fig. 3.

## O B S. X.

Wetting the Object-Glasses a little at their edges, the water crept in slowly between them, and the Circles thereby became less and the Colours more faint: Insomuch that as the water crept along one half of them at which it first arrived would appear broken off from the other half, and contracted into a less room. By measuring them I found the proportions of their Diameters to the Diameters of the like Circles made by Air to be about seven to eight, and consequently the intervals of the Glasses at like Circles, caused by those two mediums Water and Air, are as about three to four. Perhaps it may be a general Rule, That if any other medium more or less dense than water be compressed between the Glasses, their intervals at the Rings caused thereby will be to their intervals caused by interjacent Air,

Air, as the Sines are which measure the refraction made out of that medium into Air.

## O B S. XI.

When the water was between the Glasses, if I pressed the upper Glass variously at its edges to make the Rings move nimbly from one place to another, a little white Spot would immediately follow the center of them, which upon creeping in of the ambient water into that place would presently vanish. Its appearance was such as interjacent Air would have caused, and it exhibited the same Colours. But it was not Air, for where any bubbles of Air were in the water they would not vanish. The reflexion must have rather been caused by a subtiler medium, which could recede through the Glasses at the creeping in of the water.

## O B S. XII.

These Observations were made in the open Air. But further to examin the effects of coloured Light falling on the Glasses, I darkened the Room, and viewed them by reflexion of the Colours of a Prism cast on a Sheet of white Paper, my Eye being so placed that I could see the coloured Paper by reflexion in the Glasses, as in a Looking-glass. And by this means the Rings became distincter and visible to a far greater number than in the open Air. I have sometimes seen more than twenty of them, whereas in the open Air I could not discern above eight or nine.

O B S.